Reasons for tooth extraction among patients in Sebha, Libyan Arab Jamahiriya: a pilot study
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SUMMARY We investigated the causes of tooth extraction among patients in Sebha in southern Libyan Arab Jamahiriya. A total of 600 patients who had undergone tooth extraction were surveyed. We found more males (63%) than females had had teeth extracted and also patients with no education (53%). Caries and periodontal disease were the main causes of tooth extraction. For those patients who opted for tooth extraction over other treatment, they mostly did so for financial reasons. There was generally poor oral hygiene and oral knowledge, which should be tackled.

Introduction

Tooth extraction should be the last option of dental treatment; however, it is often the first to be used [1–3]. Sebha is the largest city in the south of the Libyan Arab Jamahiriya and is in the middle of Libyan desert. People come to Sebha from the various urban areas surrounding it and therefore it has a heterogeneous society with a low level of health education.

Many studies have been carried out worldwide which have investigated the reasons for tooth extraction [4–8]. Most of these studies have blamed caries and found that periodontal diseases were the main causes of tooth extraction.

While the high frequency of extractions in this area indicates the presence of oral health problems, no previous study of dental needs and treatment has been performed. This paper describes a pilot study in the Sebha area.

Materials and methods

A simple clinical survey was performed of 600 patients who received extraction treatment in the dental section of the Libyan Red Crescent clinic in Sebha during a period of 7 months. A survey form was adapted from the American Dental Association diagnosis and treatment forms and a careful examination of each case was made before extraction. The results are given in Tables 1 and 2.

Results and discussion

It was found that only 9% of the patients made regular visits to the dentist. The highest incidence of extraction was among uneducated patients (53%), whereas the extraction rate was 12% among university graduate patients and 25% among those with primary-school education. Surprisingly, 42% of the extractions were suggested...
Table 1: Extraction distribution according to sex and age

<table>
<thead>
<tr>
<th>Age (years)</th>
<th>Males No.</th>
<th>%</th>
<th>Females No.</th>
<th>%</th>
<th>Total No.</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>15-30</td>
<td>288 48</td>
<td>108 18</td>
<td>396 66</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>30-60</td>
<td>120 20</td>
<td>84 14</td>
<td>204 34</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>408 68</td>
<td>192 32</td>
<td>600 100</td>
<td></td>
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</tbody>
</table>

by the patients and performed at their request rather than at the dentist's request. This clearly illustrates the effect of poor oral and health education.

The primary causes of dental extraction were due to pulpal (34%) or periapical (57%) involvement, periodontal causes (41%), traumatic tooth fracture (38%) or impaction (8.5%). Unfortunately, moderate to extensive dental caries, which could have been treated conservatively, were found among the extracted teeth (13%). Few extractions were performed in cases in which the patient needed a prosthetic solution (2%) or orthodontic treatment (0.1%) or had cosmetic concerns (0.2%). Many cases had multiple reasons for treatment. The many extracted teeth could have been saved through endodontic and periodontal therapy but extraction was chosen by the patient for financial reasons (58%), insufficient time (20%) or transportation difficulties (22%).

There were more extractions among men (66%) than among women (34%). There were more men under 30 years of age (48% of total) than men between 30 years and 60 years of age (20%). In all, 18% of the patients were women under 30 years of age and 14% were women between 30 years and 60 years of age. This distribution could be explained by differences between the sexes with regard to the importance of aesthetics. It also draws attention to poor education and dental health care, which may make extractions more common among younger patients than among older patients and might be due to the increase of risk of caries and periodontal disease.

Most of the teeth that were extracted were molars (67%); 23% were premolars and only 10% were anterior. This might be explained by the fact that molars are more involved in mastication and thus exposed to
a greater risk of caries. There may also be a greater effort to preserve anteriors and pre-molars for aesthetic reasons. This finding concurs with other reports elsewhere in the world [4–9].

The study confirmed that caries (54%) and periodontal disease (41%) are the main causes of tooth extraction.

**Recommendations**

The present study found low levels of oral hygiene and education as well as a need for improvement of governmental dental services including personnel, techniques, materials and monitoring, which should offer affordable dental treatment to patients. A larger population study is recommended that would include all dental clinics in Sebha. Furthermore, there is a need for mobile dental units that could travel to the urban areas and schools of Sebha to help patients with socioeconomic problems and which could motivate the people to practise proper dental health care.

**References**


